

Throttle Body for Forklift

Throttle Body for Forklift - The throttle body is a component of the intake control system in fuel injected engines so as to regulate the amount of air flow to the engine. This particular mechanism functions by placing pressure on the operator accelerator pedal input. Generally, the throttle body is positioned between the air filter box and the intake manifold. It is normally attached to or placed near the mass airflow sensor. The biggest part inside the throttle body is a butterfly valve referred to as the throttle plate. The throttle plate's main function is so as to control air flow.

On numerous kinds of vehicles, the accelerator pedal motion is communicated through the throttle cable. This activates the throttle linkages that in turn move the throttle plate. In automobiles with electronic throttle control, otherwise known as "drive-by-wire" an electric motor controls the throttle linkages. The accelerator pedal is attached to a sensor and not to the throttle body. This particular sensor sends the pedal position to the ECU or Engine Control Unit. The ECU is responsible for determining the throttle opening based on accelerator pedal position together with inputs from other engine sensors. The throttle body has a throttle position sensor. The throttle cable connects to the black portion on the left hand side that is curved in design. The copper coil positioned near this is what returns the throttle body to its idle position when the pedal is released.

Throttle plates rotate in the throttle body each time pressure is applied on the accelerator. The throttle passage is then opened so as to allow more air to flow into the intake manifold. Usually, an airflow sensor measures this change and communicates with the ECU. In response, the Engine Control Unit then increases the amount of fluid being sent to the fuel injectors to be able to produce the desired air-fuel ratio. Generally a throttle position sensor or TPS is connected to the shaft of the throttle plate so as to provide the ECU with information on whether the throttle is in the wide-open throttle or "WOT" position, the idle position or anywhere in between these two extremes.

Various throttle bodies can have adjustments and valves to be able to control the minimum airflow throughout the idle period. Even in units which are not "drive-by-wire" there will usually be a small electric motor driven valve, the Idle Air Control Valve or IACV that the ECU utilizes to regulate the amount of air that could bypass the main throttle opening.

It is common that a lot of automobiles have a single throttle body, even though, more than one can be used and attached together by linkages so as to improve throttle response. High performance vehicles such as the BMW M1, along with high performance motorcycles like the Suzuki Hayabusa have a separate throttle body for each cylinder. These models are referred to as ITBs or "individual throttle bodies."

A throttle body is similar to the carburetor in a non-injected engine. Carburetors combine the functionality of the fuel injectors and the throttle body together. They operate by mixing the air and fuel together and by modulating the amount of air flow. Automobiles which include throttle body injection, that is referred to as CFI by Ford and TBI by GM, locate the fuel injectors within the throttle body. This permits an old engine the opportunity to be transformed from carburetor to fuel injection without really changing the engine design.